

REMARKS

Claims 1-3 and 20-23 are pending with claim 20 having been withdrawn from consideration. New claims 24 and 25 are added. Support for these new claims can be found in the specification at, for example, page 38, lines 6-7. This passage indicates that the aluminum oxide and silicon oxide used in making the inorganic oxide layer were substantially pure. As such, the resulting inorganic oxide layer would be substantially pure with respect its inorganic oxide composition.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-3 and 21-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US 5,529,832) in view of Kobayashi et al. (US 3,676,612). Applicants respectfully request reconsideration.

Independent claims 1 and 23 recite a functional roll film comprising a plastic film and an inorganic oxide layer on at least one surface of the plastic film, wherein the inorganic oxide layer is deposited by vacuum evaporation. Because it is deposited by vacuum evaporation, the inorganic oxide layer is substantially free of any organic polymeric materials. This is because any organic polymeric materials would decompose under the heat of evaporation.

In contrast to the claimed inventions, Masuda discloses a film comprising two polyester surface layers, where the polyester surface layers are made of polyester resin that may incorporate inert fine particles that may be inorganic (see, e.g., col. 3, line 53 – col. 4, line 7; col. 5, lines. 15-19, 30-45). Thus, these polyesters surface layers in Masuda have a polyester resin (which is excluded from the inorganic oxide layers recited in claims 1 and 23) mixed with the inorganic fine particles incorporated therein.

The Office Action requests confirmation that deposition by vacuum evaporation would form an inorganic oxide layer that is free of any organic polymeric materials. Therefore, in support of Applicants' assertion, Applicants submit two technical literature references (attached hereto), which are translated as follows:

Reference 1

Somei Okiyama, "Plastic Film [Manufacturing and Application]", 2nd ed. (GIHODO Shuppan: July 5,1971)

Part A

"3.6 Vacuum Evaporation of Plastic Film

Vacuum evaporation of plastic film is forming thin layer by vaporize aluminum and zinc and so on by heating under high vacuum and condense the vapor on the plastic film surface which is set in the same high vacuum."

Reference 2

Shunsuke Murahashi, "High Polymer Chemistry," (KYORITSU Shuppan: April 1, 1966)

Part B

"1.2 General Characteristics Of High-Polymer Thermal Characteristics

By heating, a linear chain high polymer generally becomes to softening state within certain temperature range and melting state by further heating or decompose at the same time of softening.

...
It is impossible to distill high polymer substance without degradation or decomposition even under high vacuum."

As indicated in Reference 2, polymer materials would decompose when vaporized. This would preclude the deposition of polymeric materials using vacuum evaporation. As such, an inorganic oxide layer that is deposited by vacuum evaporation would necessarily be substantially free of any polymeric materials

Thus, the invention of claims 1 and 23 are distinguished from Masuda. Furthermore, Kobayashi also fails to disclose an inorganic oxide layer, as in the claimed invention. As such, the suggested combination of Masuda and Kobayashi would not arrive at the invention of claims 1 and 23.

For at least these reasons, Applicants submit that claims 1 and 23, and the claims that depend therefrom, are patentable over Masuda and Kobayashi. Accordingly, withdrawal of the rejection is respectfully requested.

The Office Action asserts that the article by Mattox (submitted by Applicants on May 1, 2008) states that plastics/polymers are used to deposit films via vacuum deposition. Applicants respectfully disagree because the Mattox article is silent on that matter.

Furthermore, the Office Action provides no evidence-based reasoning for disputing Applicants' assertion that the inorganic oxide layer in the claimed invention is substantially free of any organic polymeric materials. If the Examiner will maintain the rejection on this basis, Applicants respectfully request adequate evidence be provided to support the Examiner's conclusion.

CONCLUSION

Applicants respectfully submit that the present application is in condition for allowance. The Examiner is invited to contact Applicants' representative to discuss any issue that would expedite allowance of this application.

In case the filing of this paper is deemed untimely, Applicants request an extension of time. The Commissioner is authorized to charge all required fees, fees under § 1.17, or all required extension of time fees, or to credit any overpayment to Deposit Account No. 11-0600 (Kenyon & Kenyon LLP).

Respectfully submitted,

Date: 6 October 2008

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